

# Permit to Modify



**R13- 2896C**

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

*Issued to:*

**Blue Racer Mistream, LLC**  
**Natrium Extraction and Fractionation Processing Plant (NPP)**  
**051-00142**

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*William F. Durham*  
*Director*

***Issued: DRAFT • Effective: DRAFT***

*This permit will supercede and replace Permit R13-2896B issued on December 26, 2013.*

Facility Location:	Proctor, Marshall County, West Virginia
Mailing Address:	5949 Sherry Lane, Suite 1300, Dallas, TX 75225
Facility Description:	Natural Gas Extraction/Fractionation Facility
NAICS Codes:	211112
UTM Coordinates:	512.1 km Easting • 4400.8 km Northing • Zone 17
Latitude/Longitude:	39.75969/-80.86172
Permit Type:	Modification
Description of Change:	Removal of annual fuel usage limit on the 216.7 mmBtu/hr Hot Oil Heater (S001) and addition of the following: four (4) new 61.6 mmBtu/hr heaters, a second fractionation train consisting of two (2) de-ethinizer towers, an ethane amine treating unit, a depropanizer, and a debutanizer, and increasing various facility storage capacities.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.*

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*This permit does not affect 45CSR30 applicability, the source is a nonmajor source subject to 45CSR30.*

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## 1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device
S001	P001	Hot Oil Heater	2012	216.7 MMBTU/hr	None
S016	P016	Hot Oil Heater	2014	61.58 MMBTU/hr	None
S017	P017	Hot Oil Heater	2014	61.58 MMBTU/hr	None
S018	P018	Hot Oil Heater	2014	61.58 MMBTU/hr	None
S019	P019	Hot Oil Heater	2014	61.58 MMBTU/hr	None
S002	P002	Fire Pump #1	2012	700 HP	None
S003	P003	Fire Pump #2	2012	700 HP	None
S004	P004	Main Flare	2013	19,800,000 scf/hr	n/a
S021	P021	Emergency Flare	2014	TBD	n/a
S005	P004	Gasoline Storage Tank	2013	17,000 bbl (714,000 gal)	Natural Gas Blanket <sup>(1)</sup>
S023	P004	Gasoline Storage Tank	2014	38,788 bbl (1,629,096 gal)	Natural Gas Blanket <sup>(1)</sup>
S006	P001	Glycol Dehydration System	2012, TBD	460 MMcf/d	None
S007	Flare (P004)	Slop Oil Tank (TK-906)	2013	500 bbl	Emergency Relief to VRU to Flare
S008	Flare (Emergency only)	Product Loading – Closed Loop	2012	35,000 gpm (Truck, Rail and Barge)	Vapor Return to Tank (S005)
S011	P005	Ethane Amine Regenerator	2012	29 mmscfd	None
S014	P006	Ethane Amine Regenerator	2014	100 mmscfd unit	None
S012	P012	Regenerative Gas Heater	2013	9.7 MMBTU/hr	None
S022	P022	Regenerative Gas Heater	2014	9.7 MMBTU/hr	None
S013	P013	Cryogenic Hot Medium Oil (HMO) Heater	2013	26.3 MMBTU/hr	None
S020	P020	Glycol Reboiler	2014	3.0 MMBTU/hr	None
US-800	Flare (Emergency only)	Spherical Propane Storage Tank	2012	51,000 bbl (2,142,000 gal)	Pressure Tank
US-801	Flare (Emergency only)	Spherical Isobutane Storage Tank	2012	20,600 bbl (865,200 gal)	Pressure Tank

<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Year Installed/Modified</b>	<b>Design Capacity</b>	<b>Control Device</b>
US-804	Flare (Emergency only)	Spherical Normal Butane Storage Tank	2012	20,600 bbl (865,200 gal)	Pressure Tank
US-805	Flare (Emergency only)	Spherical Natural Gas Liquid Storage Tank	2012	20,600 bbl (865,200 gal)	Pressure Tank
n/a	Flare (Emergency only)	Four (4) Pressurized Butane Bullet Tanks	2014	90,000 gal	Pressure Tank
TK-907	TK-907	Produced Water Tank	2012	1,500 bbl (63,000 gal)	None
TK-950	TK-950	Firewater Tank	2012	51,430 bbl (2,160,060 gal)	None
TK-605	TK-605	TEG Storage Tank	2012	1,000 gal	None
TK-2605	TK-2605	TEG Storage Tank	2012	1,000 gal	None
TK-119A	TK-119A	Lube Oil Storage Tank	2012	90 bbl (3,780 gal)	None
TK-119B	TK-119B	Lube Oil Storage Tank	2012	90 bbl (3,780 gal)	None
TK-452	TK-452	Spent Caustic Tank	2012	500 bbl (21,000 gal)	None
TK-453	TK-453	Caustic Tank	2012	500 bbl (21,000 gal)	None
UT-909	UT-909	Open Drain Sump (Oil/Water)	2012	2,800 gal	None
TK-2119A	TK-2119A	Lube Oil Storage Tank	2012	90 bbl (3,780 gal)	None
TK-2119B	TK-2119B	Lube Oil Storage Tank	2012	90 bbl (3,780 gal)	None
UT-2520	UT-2520	Amine Sump	2012	2,800 gal	None
TK-2524	TK-2524	Amine Storage Tank	2012	100 bbl (4,200 gal)	None
TK-2522	TK-2522	Treated Water Storage Tank	2012	100 bbl (4,200 gal)	None
UT-607	UT-607	Glycol Sump (TEG/Water)	2013	1,400 gal	Vapor Return to Fuel Header
UT-2909	UT-2909	Open Drain Sump (Oil/Water)	2012	2,800 gal	None
TK-D1	TK-D1	Diesel Fuel Storage Tank	2012	700 gal	None
TK-D2	TK-D2	Diesel Fuel Storage Tank	2012	700 gal	None

(1) Tank uses a natural gas blanket to prevent emissions of natural gasoline. Working/breathing losses of natural gas blanket are collected and sent to Hot Oil Heater as a supplemental fuel.

### 1.1. Control Devices

Emission Unit	Pollutant	Control Device	Control Efficiency
Maintenance, Blowdowns, Pressure Relief Valves	Volatile Organic Compounds	Flare (C004)	99.5 %
	Total HAPs		99.5 %
Non-Routine Emergency Releases Only	Volatile Organic Compounds	Emergency Flare (C021)	99.5 %
	Total HAPs		99.5 %



## 2.0. General Conditions

### 2.1. Definitions

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5 µm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CO</b>	Carbon Monoxide	<b>Ppb</b>	Pounds per Batch
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>Pph</b>	Pounds per Hour
<b>DAQ</b>	Division of Air Quality	<b>Ppm</b>	Parts per Million
<b>DEP</b>	Department of Environmental Protection	<b>Ppm<sub>v</sub> or ppmv</b>	Parts per Million by Volume
<b>dscm</b>	Dry Standard Cubic Meter	<b>PSD</b>	Prevention of Significant Deterioration
<b>FOIA</b>	Freedom of Information Act	<b>Psi</b>	Pounds per Square Inch
<b>HAP</b>	Hazardous Air Pollutant	<b>SIC</b>	Standard Industrial Classification
<b>HON</b>	Hazardous Organic NESHAP	<b>SIP</b>	State Implementation Plan
<b>HP</b>	Horsepower	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>lbs/hr</b>	Pounds per Hour	<b>TAP</b>	Toxic Air Pollutant
<b>LDAR</b>	Leak Detection and Repair	<b>TPY</b>	Tons per Year
<b>M</b>	Thousand	<b>TRS</b>	Total Reduced Sulfur
<b>MACT</b>	Maximum Achievable Control Technology	<b>TSP</b>	Total Suspended Particulate
<b>MDHI</b>	Maximum Design Heat Input	<b>USEPA</b>	United States Environmental Protection Agency
<b>MM</b>	Million	<b>UTM</b>	Universal Transverse Mercator
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VEE</b>	Visual Emissions Evaluation
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>NA</b>	Not Applicable	<b>VOL</b>	Volatile Organic Liquids
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		

### **2.3. Authority**

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

### **2.4. Term and Renewal**

- 2.4.1. This permit supersedes and replaces previously issued Permit R13-2896B. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

### **2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2896, R13-2896B, R13-2896C, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
[45CSR§§13-5.11 and 10.3.]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### **2.6. Duty to Provide Information**

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

### **2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

## **2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

## **2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

## **2.10 Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

## **2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.

2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The permitted facility was at the time being properly operated;
- c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

### **2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

### **2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

### **2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

### **2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

**2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

**2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements *[Reserved]*

#### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to

comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
  1. The permit or rule evaluated, with the citation number and language;
  2. The result of the test for each permit or rule condition; and,
  3. A statement of compliance or noncompliance with each permit or rule condition.

**[WV Code § 22-5-4(a)(14-15) and 45CSR13]**

**3.4. Recordkeeping Requirements**

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The

remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

**[45CSR§4. State Enforceable Only.]**

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street  
Charleston, WV 25304-2345

**If to the US EPA:**

Associate Director  
Office of Air Enforcement and Compliance Assistance  
(3AP20)  
U.S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

#### 3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.



## 4.0. Source-Specific Requirements

### 4.1. Limitations and Standards

- 4.1.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- The date, place as defined in this permit, and time of sampling or measurements;
  - The date(s) analyses were performed;
  - The company or entity that performed the analyses;
  - The analytical techniques or methods used;
  - The results of the analyses; and
  - The operating conditions existing at the time of sampling or measurement.
- 4.1.2. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.
- 4.1.3. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
**[45CSR§13-5.11.]**
- 4.1.4. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- The equipment involved.
  - Steps taken to minimize emissions during the event.
  - The duration of the event.
  - The estimated increase in emissions during the event.
- For each such case associated with an equipment malfunction, the additional information shall also be recorded:
- The cause of the malfunction.
  - Steps taken to correct the malfunction.
  - Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.1.5. **Maximum Throughput Limitation.** The total maximum combined wet natural gas throughput through the gas processing plant shall not exceed 400 mmscf/day. To demonstrate compliance, the permittee shall maintain records of the amount of natural gas processed in the gas processing plant.

## 5.0. Source-Specific Requirements (Hot Oil Heater, S001)

### 5.1. Limitations and Standards

5.1.1. The MDHI of the Hot Oil Heater designated as S001 shall not exceed 216.7 MMBTU/hr and, for each Hot Oil Heater designated as S016-S019, shall not exceed 61.58 MMBTU/hr. All Hot Oil Heaters (S001, S016-S019) shall be equipped with Low-NO<sub>x</sub> burners.

5.1.2. Maximum emissions from the Hot Oil Heaters shall not exceed the following:

a. The maximum emissions from S001 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S001	Nitrogen Oxides	5.63	24.68
	Carbon Monoxide	3.25	14.24
	VOCs	0.37	1.61
	Particulate Matter-10	1.60	7.07
	Hexane	0.38	1.67

b. The maximum emissions from each heater S016-S019 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S016-S019	Nitrogen Oxides	1.48	6.47
	Carbon Monoxide	3.63	15.91
	VOCs	0.33	1.46
	Particulate Matter-10	0.46	2.01
	Hexane	0.11	0.47

5.1.3. The quantity of natural gas that shall be consumed in the 216.7 MMBTU/hr Hot Oil Heater (S001) shall not exceed 210,531 standard cubic feet per hour and  $1,213 \times 10^6$  standard cubic feet per year. The quantity of natural gas that shall be consumed in each 61.58 MMBTU/hr Hot Oil Heater (S016-S019) shall not exceed 60,373 standard cubic feet per hour and  $529 \times 10^6$  standard cubic feet per year.

5.1.4. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.

**[45CSR§2-3.1.]**

5.1.5. The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

**[40CFR§60.40b(a)]**

- 5.1.6. Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO<sub>2</sub> emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO<sub>2</sub> emissions limit in paragraph (k)(1) of this section.  
[40CFR§60.42b(k)(2)]

- 5.1.7. The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO<sub>2</sub> standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).  
[40CFR§60.45b(j)]

## **5.2. Monitoring Requirements**

- 5.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 5.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

## **5.3. Testing Requirements**

- 5.3.1. Compliance with the visible emission requirements of section 5.1.4 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 5.1.4. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.  
[45CSR§2-3.2.]
- 5.3.2. Within 60 days after achieving the maximum rate at which the Hot Oil Heaters (S016-S019) will be operated, but not later than 180 days after initial startup, the permittee shall conduct, or have conducted, a performance test on one of units to determine compliance with the CO and NO<sub>x</sub> emission limits listed under 5.1.2(b). The test shall be conducted using an appropriate test method and according to the procedures given under 3.3 of this permit.

## **5.4. Recordkeeping Requirements**

- 5.4.1. To demonstrate continuous compliance with sections 5.1.1-5.1.3, the permittee shall maintain a monthly record of the amount of natural gas consumed in S001 and S0016-S019.
- 5.4.2. Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.  
[40CFR§60.48(c)(g)(1)]
- 5.4.3. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO<sub>2</sub> standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.  
[40CFR§60.48(c)(g)(2)]
- 5.4.4. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most
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current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO<sub>2</sub> standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

**[40CFR§60.48(c)(g)(3)]**

- 5.4.5. The permittee shall maintain records of all monitoring data required by Section 5.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80 °F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.
- 5.4.6. The Hot Oil Heaters S016-S019 shall meet all applicable recordkeeping requirement given under 40 CFR 60, Subpart Dc.

## **5.5. Reporting Requirements**

- 5.5.1. The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

1. The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility.
2. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i).
3. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.
4. Notification that an emerging technology will be used for controlling emissions of SO<sub>2</sub>. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42b(a) unless and until this determination is made by the Administrator.

**[40CFR§60.49b(a)]**

- 5.5.2. The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in §60.42b or §60.43b shall either:
1. The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or

2. The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:
  - i. The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;
  - ii. The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;
  - iii. The ratio of different fuels in the mixture; and
  - iv. The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

**[40CFR§60.49b(r)]**

- 5.5.3. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

## **6.0. Source-Specific Requirements (Cryo HMO Heater, S013)**

### **6.1. Limitations and Standards**

- 6.1.1. Maximum Design Heat Input. The maximum design heat input for the Cryo HMO Heater (S013) shall not exceed 26.3 MMBTU/hr.
- 6.1.2. Maximum emissions from the 26.3 MMBTU/hr Cryo HMO Heater (S013) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	2.56	11.19
Carbon Monoxide	2.15	9.40

- 6.1.3. To demonstrate compliance with Section 6.1.2, the hourly quantity of natural gas that shall be consumed in the 26.3 MMBTU/hr Cryo HMO Heater (S013) shall not exceed 25,551 standard cubic feet per hour and  $223.8 \times 10^6$  standard cubic feet per year.
- 6.1.4. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.  
**[45CSR§2-3.1.]**
- 6.1.5. The permitted facility shall comply with all applicable provisions of 40CFR60 Subpart Dc, provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with §60.48c. These reports shall be submitted in accordance with the time lines and in the order set forth in §60.48c and submitted to the addresses listed in Section 3.5.3.

### **6.2. Monitoring Requirements**

- 6.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 6.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

### **6.3. Testing Requirements**

- 6.3.1. Compliance with the visible emission requirements of section 6.1.4 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 6.1.4. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.  
**[45CSR§2-3.2.]**

### **6.4. Recordkeeping Requirements**

- 6.4.1. To demonstrate compliance with sections 6.1.1 and 6.1.2, the permittee shall maintain a monthly record of the amount of natural gas consumed and the hours of operation of the 26.3 MMBTU/hr Cryo HMO Heater (S013). Compliance with the maximum throughput limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of

the monthly throughput at any given time during the previous twelve consecutive calendar months.

- 6.4.2. Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

**[40CFR§60.48(c)(g)(1)]**

- 6.4.3. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO<sub>2</sub> standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

**[40CFR§60.48 (c)(g)(2)]**

- 6.4.4. As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO<sub>2</sub> standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

**[40CFR§60.48(c)(g)(3)]**

- 6.4.5. The permittee shall maintain records of all monitoring data required by Section 6.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.

## **6.5. Reporting Requirements**

- 6.5.1. The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

1. The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
2. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.
3. The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.
4. Notification if an emerging technology will be used for controlling SO<sub>2</sub> emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

**[40CFR§60.48c(a)]**

- 6.5.2. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.



## **7.0. Source-Specific Requirements (Regen Gas Heaters, S012, S022)**

### **7.1. Limitations and Standards**

- 7.1.1. The MDHI of each Regen Gas Heater (S012, S022) shall not exceed 9.7 MMBTU/hr.
- 7.1.2. Maximum emissions from each 9.7 MMBTU/hr Regen Gas Heater (S012, S022) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.95	4.17
Carbon Monoxide	0.80	3.50

- 7.1.3. To demonstrate compliance with Section 7.1.2, the quantity of natural gas that shall be consumed in each 9.7 MMBTU/hr Regen Gas Heater (S012, S022) shall not exceed 9,424 cubic feet per hour and  $82.55 \times 10^6$  cubic feet per year.
- 7.1.4. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.  
[45CSR§2-3.1.]

### **7.2. Monitoring Requirements**

- 7.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 7.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

### **7.3. Testing Requirements**

- 7.3.1. Compliance with the visible emission requirements of section 7.1.4 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 7.1.4. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.  
[45CSR§2-3.2.]

### **7.4. Recordkeeping Requirements**

- 7.4.1. To demonstrate compliance with sections 7.1.1, 7.1.2, 7.1.3, the permittee shall maintain records of the amount of natural gas consumed in each 9.7 MMBTU/hr Regen Gas Heater (S012, S022).
- 7.4.2. The permittee shall maintain records of all monitoring data required by Section 7.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.

## **7.5. Reporting Requirements**

- 7.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

## 8.0. Source-Specific Requirements (Fire Pumps, S002, S003)

### 8.1. Limitations and Standards

- 8.1.1. The quantity of diesel fuel that shall be consumed in each of the 700 hp diesel fired fire pump engines, Caterpillar C18 (S002, S003) shall not exceed 35.9 gallons per hour and 3,950 gallons per year.
- 8.1.2. Maximum emissions from each of the 700 hp diesel fired fire pumps, Caterpillar C18 (S002, S003) shall not exceed the following limits:

Emission Unit IDThe new Reg	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S002	Nitrogen Oxides	5.31	0.27
S003	Carbon Monoxide	2.18	0.11
	Volatile Organic Compounds	0.08	0.01

- 8.1.3. **Maximum Yearly Operation Limitation.** The maximum yearly hours of operation for each of the 700 hp diesel fired fire pump engines, Caterpillar C18 (S002, S003) shall not exceed 100 hours per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.
- 8.1.4. **Emission Standards**  
Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants. [40CFR§60.4205c]
- 8.1.5. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4204 and §60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. [40CFR§60.4206]
- 8.1.6. **Fuel Requirements**  
Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. [40CFR§60.4207b]
- 8.1.7. **Fuel Requirements**  
Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator. [40CFR§60.4207c]
- 8.1.8. **Fuel Requirements**  
Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section. [40CFR§60.4207e]
- 8.1.9. In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that

do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section. [40CFR§60.4208g]

- 8.1.10. If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211. [40CFR§60.4209]
- 8.1.11. If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine. [40CFR§60.4209a]
- 8.1.12. If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40CFR§60.4209b]
- 8.1.13. If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you. [40CFR§60.4211a]
- 8.1.14. If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications. [40CFR§60.4211c]
- 8.1.15. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited. [40CFR§60.4211e]

## **8.2. Testing Requirements**

### **8.2.1. Stack Testing**

At the time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Secretary thereafter, appropriate tests consisting of visual determinations or conventional in-stack measurements or other tests the Secretary may specify shall be conducted to determine compliance. For cause, the Secretary may request the permittee to install such stack gas monitoring devices as the Secretary deems necessary to determine continuing compliance. The data from such devices shall be readily available for review on-site or such other reasonable location that the Secretary may specify. At the request of the Secretary, such data shall be made available for inspection or copying and the Secretary may require periodic submission of excess emission reports (45CSR13).

8.2.1.a. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary. **[WV Code § 22-5-4(a)(15)]**

**8.2.2. Notification of Compliance Testing**

For any compliance test to be conducted by the permittee as set forth in this section, a test protocol shall be submitted to the Secretary at least thirty (30) calendar days prior to the scheduled date of the test. Such compliance test protocol shall be subject to approval by the Secretary. The permittee shall notify the Secretary at least fifteen (15) calendar days in advance of actual compliance test dates and times during which the test (or tests) will be conducted.

**8.2.3. Alternative Test Methods**

The Secretary may require a different test method or approve an alternative method in light of any technology advancements that may occur and may conduct such other tests as may be deemed necessary to evaluate air pollution emissions.

8.2.4. Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section. **[40CFR§60.4212]**

8.2.5. The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F. **[40CFR§60.4212a]**

8.2.6. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039. **[40CFR§60.4212b]**

8.2.7. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

NTE Requirement for each pollutant -  $(1.25) \times (\text{STD})$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate. **[40CFR§60.4212c]**

8.2.8. Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load. **[40CFR§60.4213a]**

8.2.9. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). **[40CFR§60.4213b]**

8.2.10. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour. [40CFR§60.4213c]

8.2.11. To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section. [40CFR§60.4213d]

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 2})$$

Where:

$C_i$  = concentration of  $\text{NO}_x$  or PM at the control device inlet,  
 $C_o$  = concentration of  $\text{NO}_x$  or PM at the control device outlet, and  
 $R$  = percent reduction of  $\text{NO}_x$  or PM emissions.

(2) You must normalize the  $\text{NO}_x$  or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen ( $\text{O}_2$ ) using Equation 3 of this section, or an equivalent percent carbon dioxide ( $\text{CO}_2$ ) using the procedures described in paragraph (d)(3) of this section.

Where:

$$C_{\text{adj}} = C_d \frac{5.9}{20.9 - \% \text{O}_2} \quad (\text{Eq. 3})$$

$C_{\text{adj}}$  = Calculated  $\text{NO}_x$  or PM concentration adjusted to 15 percent  $\text{O}_2$ .  
 $C_d$  = Measured concentration of  $\text{NO}_x$  or PM, uncorrected.  
 $5.9 = 20.9$  percent  $\text{O}_2$  - 15 percent  $\text{O}_2$ , the defined  $\text{O}_2$  correction value, percent.  
 $\% \text{O}_2$  = Measured  $\text{O}_2$  concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent  $\text{O}_2$  and  $\text{CO}_2$  concentration is measured in lieu of  $\text{O}_2$  concentration measurement, a  $\text{CO}_2$  correction factor is needed. Calculate the  $\text{CO}_2$  correction factor as described in paragraphs (d)(3)(I) through (iii) of this section.

(i) Calculate the fuel-specific  $F_o$  value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 4})$$

Where:

$F_o$  = Fuel factor based on the ratio of  $\text{O}_2$  volume to the ultimate  $\text{CO}_2$  volume produced by the fuel at zero percent excess air.  
 $0.209$  = Fraction of air that is  $\text{O}_2$ , percent/100.  
 $F_d$  = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19,  $\text{dsm}^3/\text{J}$  ( $\text{dscf}/10^6 \text{ Btu}$ ).  
 $F_c$  = Ratio of the volume of  $\text{CO}_2$  produced to the gross calorific value of the fuel from Method 19,  $\text{dsm}^3/\text{J}$  ( $\text{dscf}/10^6 \text{ Btu}$ ).

- (ii) Calculate the CO<sub>2</sub> correction factor for correcting measurement data to 15 percent O<sub>2</sub>, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 5})$$

Where:

XCO<sub>2</sub> = CO<sub>2</sub> correction factor, percent.

5.9 = 20.9 percent O<sub>2</sub> – 15 percent O<sub>2</sub>, the defined O<sub>2</sub> correction value, percent.

- (iii) Calculate the NO<sub>x</sub> and PM gas concentrations adjusted to 15 percent O<sub>2</sub> using CO<sub>2</sub> as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 6})$$

Where:

C<sub>adj</sub> = Calculated NO<sub>x</sub> or PM concentration adjusted to 15 percent O<sub>2</sub>.

C<sub>d</sub> = Measured concentration of NO<sub>x</sub> or PM, uncorrected.

%CO<sub>2</sub> = Measured CO<sub>2</sub> concentration, dry basis, percent.

- 8.2.12. To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 7 of this section: [40CFR§60.4213e]

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 7})$$

Where:

ER = Emission rate in grams per KW-hour.

C<sub>d</sub> = Measured NO<sub>x</sub> concentration in ppm.

1.912x10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

- 8.2.13. To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 8})$$

Where:

ER = Emission rate in grams per KW-hour.

C<sub>adj</sub> = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

### **8.3. Recordkeeping and Reporting Requirements**

#### **8.3.1. Records, Operation and Compliance**

- a. For the purpose of determining compliance with Section 8.1.1, the permittee shall maintain a monthly record of quantity of diesel fuel burned.
- b. For the purpose of determining compliance with Section 8.1.3, the permittee shall maintain a monthly record of hours of operation.

#### **8.3.2. Monitoring Information**

The permittee shall keep the following records of monitoring information:

- a. The date, place as defined in this permit and time of sampling measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

- 8.3.3. Equipment Maintenance Records.** The permittee shall maintain maintenance records relating to failure and/or repair of fire pump equipment. In the event of equipment or system failure, these records shall document the permittee's effort to maintain proper and effective operation of such equipment and/or systems.

#### **8.3.4. Compliance Testing**

The permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in Section 8.0.

- 8.3.6.** If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. **[40CFR§60.4214b]**
- 8.3.7.** If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. **[40CFR§60.4214c]**



## **9.0. Source-Specific Requirements (40CFR63 Subpart ZZZZ Requirements, Fire Pumps, S002, S003)**

### **9.1. Limitations and Standards**

- 9.1.1. The permittee must comply with the applicable operating limitations in this section no later than October 19, 2013.

**[40 C.F.R. § 63.6595(a)]**

- 9.1.2. *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

The permittee meets the criteria of paragraph (c)(1), which is for a new or reconstructed stationary RICE located at an area source. The permittee must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII listed in Section 8.0 of this permit.

## **10.0. Source-Specific Hazardous Air Pollutant Requirements (Natural Gas Dehydration, S006)**

### **10.1. Limitations and Standards**

- 10.1.1. Maximum Throughput Limitation. The aggregate maximum wet natural gas throughput to the glycol dehydration unit/still column(s) shall not exceed 460 mmscfd. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 10.1.2. For purposes of determining potential HAP emissions at production-related facilities, the methods specified in 40 CFR 63, Subpart HH (i.e. excluding compressor engines from HAP PTE) shall be used.
- 10.1.3. All natural gas glycol dehydration activities (S006) shall be designed and operated in accordance with the following:
  - a. The vapors/overheads from the still column shall be routed through a closed vent system to the hot oil heater (S001) at all times when there is a potential that vapors (emissions) can be generated from the still column.
  - b. The vapors/overheads from the still column shall be introduced into the flame zone of the hot oil heater (S001).
- 10.1.4. The permittee is exempt from the requirements of 40CFR§63.760(b)(2) if the criteria below is met, except that the records of the determination of these criteria must be maintained as required in 40CFR§63.774(d)(1).
  - a. The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year (1 ton/yr), as determined by the procedures specified in §63.772(b)(2) of this subpart.  
**[40CFR§63.764(e)]**
- 10.1.5. Any source that determines it is not a major source but has actual emissions of 5 tons per year or more of a single HAP, or 12.5 tons per year or more of a combination of HAP (i.e., 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data measured during the preceding 12 months.  
**[40CFR§63.760(c)]**

### **10.2. Monitoring Requirements**

- 10.2.1. The permittee shall monitor the throughput of wet natural gas fed to the dehydration system(s) on a monthly basis for glycol dehydration (S006).
- 10.2.2. In order to demonstrate compliance with the area source status, claimed within section 10.1, as well as the benzene exemption in section 10.1.4, the following parameters shall be measured at least once quarterly, with the exception of natural gas flowrate annual daily average, natural gas flowrate maximum design capacity, and wet gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values as listed below.
  - a. Natural Gas Flowrate
    - i. Operating hours per quarter
    - ii. Quarterly throughput (MMscf/quarter)
    - iii. Annual daily average (MMscf/day), and

- iv. Maximum design capacity (MMscf/day)
- b. Absorber temperature and pressure
- c. Lean glycol circulation rate
- d. Glycol pump type and maximum design capacity (gpm)
- e. Flash tank temperature and pressure, if applicable
- f. Stripping Gas flow rate, if applicable
- g. Wet gas composition (upstream of the absorber – dehydration column) sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc™ Technical Reference User Manual and Handbook V4
- h. Wet gas water content (lbs H<sub>2</sub>O/MMscf)
- i. Dry gas water content (lbs H<sub>2</sub>O/MMscf) at a point directly after exiting the dehydration column and before any additional separation points

The following operating parameter(s) may be assigned default values when using GRI-GLYCalc:

- a. Dry gas water content can be assumed to be equivalent to pipeline quality at 7 lb H<sub>2</sub>O / MMscf
- b. Wet gas water content can be assumed to be saturated
- c. Lean glycol water content if not directly measured may use the default value of 1.5 % water as established by GRI
- d. Lean glycol circulation rate may be estimated using the TEG recirculation ratio of 3 gal TEG / lb H<sub>2</sub>O removed.

Note: If you are measuring and using actual wet or dry gas water content, then you should also measure the glycol recirculation rate rather than using the default TEG recirculation ratio.

**[45CSR§13-5.11, §63.772(b)(2)(i)]**

### **10.3. Recordkeeping Requirements**

- 10.3.1. The permittee shall determine the composition of the wet natural gas by sampling in accordance with GPA Method 2166 and analyzing according to extended GPA Method 2286 analysis as specified in the GRI-GLYCalc™ V4 Technical Reference User Manual and Handbook. As specified in the handbook, the permittee shall sample the wet gas stream at a location prior to the glycol dehydration contactor column, but after any type of separation device, in accordance with GPA method 2166. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date. The initial compliance test must be conducted within 180 days of permit issuance or within 180 days of startup of the glycol dehydration unit, whichever is later.

Note: The DAQ defines a representative wet gas sample to be one that is characteristic of the average gas composition dehydrated throughout a calendar year. If an isolated sample is not indicative of the annual average composition, the permittee may opt to produce a weighted average based on throughput between multiple sampling events, which can be used to define a more representative average annual gas composition profile.

**[45CSR§13-5.11]**

- 10.3.2. The following testing and compliance provisions of Part 63 Subpart HH National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities are applicable to the facility:

§ 63.772 Test methods, compliance procedures, and compliance demonstrations.

- (b) Determination of glycol dehydration unit flowrate, benzene emissions, or BTEX emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate, benzene emissions, or BTEX emissions.

- (2) The determination of actual average benzene emissions or BTEX emissions from a glycol dehydration unit shall be made using the procedures of paragraph (b)(2)(i) of this requirement. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.
  - (i) The owner or operator shall determine actual average benzene emissions using the model GRI-GLYCalc<sup>TM</sup>, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc<sup>TM</sup> Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions “ (GRI-95/0368.1).

**[§63.772(b)(2)(i)]**

- 10.3.3. The permittee shall maintain a record of the wet natural gas throughput through the glycol dehydration units/still column (S006) to demonstrate compliance with section 10.1.1 of this permit.
- 10.3.4. For the purpose of documenting compliance with the emission limitations, HAP major source thresholds, as well as the benzene exemption, the permittee shall maintain records of all monitoring data, wet gas sampling, and annual GRI-GLYCalc<sup>TM</sup> emission estimates.

**[45CSR§13-5.11]**

## **11.0. Source-Specific Requirements (Vapor Recovery Unit System (C005), Natural Gasoline Storage Tanks (S005, S023))**

### **11.1. Limitations and Standards**

- 11.1.1. Each Natural Gasoline Storage Tank (S005, S023) shall continually maintain a blanket of natural gas in the vapor space of the tank to mitigate any loss of natural gasoline vapors from working/breathing losses.
- 11.1.2. Any working or breathing losses that do occur from each Natural Gasoline Storage Tank (S005, S023) shall be collected by the vapor recovery unit system (C005) whereby the vapors are returned to the plant fuel gas header.
- 11.1.3. The vapor recovery units must be installed and operating upon permit issuance. The system will employ a vapor return which shall be designed to achieve a minimum guaranteed capture efficiency of 100% for each storage tank (S005, S023) followed by the vapor recovery unit required in in this Section.
- 11.1.4. Each Natural Gasoline Storage Tank (S005, S023) shall be designed and operated in accordance with the information file in permit applications R13-2896, R13-2896B, and R13-2896C.

### **11.2. Monitoring Requirements**

- 11.2.1. To demonstrate compliance with section 11.1.3, the permittee shall monitor the vapor recovery units in accordance with the plans and specifications and manufacturer's recommendations.

### **11.3. Recordkeeping Requirements**

- 11.3.1. **Record of Maintenance of Vapor Recovery Unit.** The permittee shall maintain accurate records of the vapor recovery unit equipment inspection and/or preventative maintenance procedures.
- 11.3.2. **Record of Malfunctions of Vapor Recovery Unit.** The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the vapor recovery unit during which excess emissions occur. For each such case, the following information shall be recorded:
  - a. The equipment involved.
  - b. Steps taken to minimize emissions during the event.
  - c. The duration of the event.
  - d. The estimated increase in emissions during the event.  
For each such case associated with an equipment malfunction, the additional information shall also be recorded:
  - e. The cause of the malfunction.
  - f. Steps taken to correct the malfunction.
  - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 11.3.3. Upon request by the Director, the permittee shall report deviations within a requested time from of any occurrences when the control device was operated outside of the parameters defined in the monitoring plan.

## **12.0. Source-Specific Requirements (40CFR60 Subpart Kb, Natural Gasoline Storage Tanks, S005, S023)**

### **12.1. Applicability and Designation of Affected Facility**

- 12.1.1. Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters ( $m^3$ ) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. **[§60.110b(a)]**
- 12.1.2. This subpart does not apply to storage vessels with a capacity greater than or equal to 151  $m^3$  storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75  $m^3$  but less than 151  $m^3$  storing a liquid with a maximum true vapor pressure less than 15.0 kPa. **[§60.110b(b)]**
- 12.1.3. This subpart does not apply to the following: Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere. **[§60.110b(d)(2)]**

### **12.2. Standard for Volatile Organic Compounds (VOC)**

- 12.2.1. A closed vent system and control device meeting the following specifications:
  - (i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).
  - (ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions. **[§60.112b(a)(3)(i)(ii)]**

### **12.3. Testing and Procedures**

- 12.3.1. The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.
  - (a) *Reserved;*
  - (b) *Reserved;*
  - (c) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.
    - (1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.
      - (i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the

control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

**[40CFR§60.113b]**

## **12.4. Reporting and Recordkeeping requirements**

12.4.1. The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.  
**[§60.115b]**

12.4.2. After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2). **[§60.115b (c)]**

12.4.3. The owner or operator of each source that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by §60.7(a)(1) or, if the facility is exempt from §60.7(a)(1), as an attachment to the notification required by §60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

- (ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).
- (2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies. **§60.113b (c)**

## **12.5. Monitoring of Operations**

- 12.5.1. The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source. **§60.116b(a)**
- 12.5.2. The owner or operator of each storage vessel as specified in § 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. **§60.116b(b)**
- 12.5.3. Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. **§60.116b(c)**
- 12.5.4. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below. **§60.116b(e)**
  - (1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. **§60.116b(e)(1)**
  - (2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:
    - (i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see § 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).
    - (ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa. **§60.116b(e)(2)**
  - (3) For other liquids, the vapor pressure:
    - (i) May be obtained from standard reference texts, or
    - (ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or
    - (iii) Measured by an appropriate method approved by the Administrator; or



(iv) Calculated by an appropriate method approved by the Administrator.  
[§60.116b(e)(3)]

12.5.5. The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

- (1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.
  - (2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in § 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
    - (i) ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or
    - (ii) ASTM D323-82 or 94 (incorporated by reference—see § 60.17); or
    - (iii) As measured by an appropriate method as approved by the Administrator.
- [§60.116b(f)]

12.5.6. The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of § 60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section. [§60.116b(g)]



### 13.0. Source-Specific Requirements (Main and Emergency Flare, S004 and S021)

#### 13.1. Limitations and Standards

13.1.1. The permittee shall install a pressure-assisted flare, John Zink Company, KMI Model 12-26 Multipoint Tip (S004) with a maximum aggregate pilot light heat input of 0.201 MMBTU/hr for control of potential emissions from maintenance events, equipment blowdowns, and pressure relief valves (in addition to use during non-routine emergency events and malfunctions). The permittee shall, if determined to be necessary, operate a second flare (S021) with a maximum aggregate pilot light heat input of 0.201 MMBTU/hr or less to facilitate the performance of the main flare during times of emergency low volume flaring and also use potentially as a backup to the main flare in times of malfunction.

13.1.2. Maximum aggregate combustion emissions from operation of the main flare (S004) and the emergency flare (S021) shall not exceed the following during routine maintenance events, equipment blowdowns, and from pressure relief valves:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides <sup>(1)</sup>	0.65	0.58
Carbon Monoxide <sup>(1)</sup>	3.51	3.07
Volatile Organic Compounds <sup>(1)</sup>	0.63	0.65

(1) Includes combustion emissions from pilot lights, sweep gas combustion, and combustion of waste gases.

13.1.3 The total heat input of waste gases sent to the flare during routine maintenance events, equipment blowdowns, and pressure relief valves shall not exceed 1,664 MMBTU per rolling twelve month period. The aggregate quantity of natural gas that shall be consumed as “sweep gas” in both flares (S004, S021) shall not exceed  $11.39 \times 10^6$  cubic feet per rolling twelve month period.

13.1.4. The main and emergency flares are subject to 45CSR6. The requirements of 45CSR6 include but are not limited to the following:

- i. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where, the factor, F, is either 5.43 for an incinerator with a capacity of less than 15,000 lbs/hr or 2.72 for an incinerator with a capacity of 15,000 lbs/hr or greater. **[45CSR6 §4.1]**

- ii. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. **[45CSR6 §4.3]**
- iii. The provisions of paragraph (ii) shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per startup. **[45CSR6 §4.4]**
- iv. No person shall cause or allow the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air. **[45CSR6 §4.5]**

- v. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors. **[45CSR6 §4.6]**
  - vi. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices. **[45CSR6 §7.1]**
  - vii. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above. **[45CSR6 §7.2]**
  - viii. Due to unavoidable malfunction of equipment, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed five (5) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. **[45CSR6 §8.2]**
- 13.1.5. A pilot flame must be present at all times of operation. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
  - 13.1.6. The main and emergency flares shall be operated, with a flame present at all times whenever emissions may be vented to them, except during SSM (Startup, Shutdown, Malfunctions) events.
  - 13.1.7. The main and emergency flares shall be operated and designed in accordance with the information filed in permit application R13-2896C to achieve a destruction efficiency of 99.5%.
  - 13.1.8. The inlet gas flow rate must be equal to or less than the maximum specified by the manufacturer.
  - 13.1.9. The permittee will comply with the requirements of Section 2.12 of this permit during emergency operation of either the main or emergency flare.

### **13.2. Monitoring Requirements**

- 13.2.1. In order to demonstrate compliance with the requirements of 13.1.2, 13.1.3 and 13.1.4.i, the permittee shall monitor the aggregate throughput of sweep gas and waste gases sent to the main and emergency flare on a monthly basis and develop a reasonably accurate means of determining the total heat input of waste gases sent to the flare.
- 13.2.2. To demonstrate compliance with the flame requirements of 13.1.5 and 13.1.6, the presence of a flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

### **13.3. Testing Requirements**

- 13.3.1. In order to demonstrate compliance with the flare opacity requirements of 13.1.4.ii, the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60 Appendix A Method 22. The permittee shall conduct this test monthly. The visible emission checks shall determine the presence or absence of visible emissions. At a

minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR part 60, appendix A, Method 22 or from the lecture portion of 40 CFR part 60, appendix A, Method 9 certification course. If the flare fails the visible emissions test, the permittee must follow manufacturer's repair instructions, if available, or best combustion engineering practice as outlined in the unit inspection and maintenance plan, to return the unit to compliant operation. All repairs and maintenance activities for the flare must be recorded in a maintenance and repair log and must be available for inspection. Following return to operation from maintenance or repair activity, each device must pass an EPA Method 22, 40 CFR part 60, appendix A, visual observation.

- 13.3.2. An initial operational assurance test by the flare vendor shall be conducted to ensure flame stability and smokeless operation of the flare (S004).

#### **13.4. Recordkeeping Requirements**

- 13.4.1. For the purpose of demonstrating compliance with section 13.1.5 and 13.2.2, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.
- 13.4.2. For the purpose of demonstrating compliance with section 13.1.3, 13.1.7 and 13.3.2, the permittee shall maintain a record of the flare design evaluation. The flare design evaluation shall include, net heat value calculations, exit (tip) velocity calculations, and all supporting concentration calculations and other related information requested by the Director. The permittee shall maintain a record of the initial operational assurance test.
- 13.4.3. For the purpose of demonstrating compliance with the requirements set forth in sections 13.1.4.vi and 13.1.4.vii, the permittee shall maintain records of testing conducted in accordance with 13.3.2.
- 13.4.4. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of section 13.2 and testing requirements of section 13.3.
- 13.4.5. For the purpose of demonstrating compliance with section 13.1.4.ii, the permittee shall maintain records of the visible emission opacity tests conducted per Section 13.3.1.

#### **13.5. Reporting Requirements**

- 13.5.1. If permittee is required by the Director to demonstrate compliance with section 13.1.4.vi and 13.1.4.vii, then the permittee shall submit a testing protocol at least thirty (30) days prior to testing and shall submit a notification of the testing date at least fifteen (15) days prior to testing. The permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.
- 13.5.2. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
- 13.5.3. Any deviation(s) from the flare design and operation criteria in Section 13.1.7 and permit application R13-2896B, shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but no later than ten (10) calendar days of discovery of such deviation.
- 13.5.4. The permittee shall report to the Director, the time, cause of event, estimate of emissions and corrective actions taken when the flare was used for an emergency at the facility.

## **14.0. Source-Specific Hazardous Air Pollutant Requirements (Ethane Amine Units, S011, S014)**

### **14.1. Limitations and Standards**

- 10.1.1. Maximum Throughput Limitation. The aggregate maximum gas throughput to both Ethane Amine Units shall not exceed 129 mmscfd. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 14.1.2. Each Ethane Amine Unit (S011, S014) shall be designed and operated in accordance with the following:
  - a. Carbon dioxide will be removed from the ethane product in an amine contacting system.
  - b. The total ethane product shall be contacted with an amine solution in the Amine Contactor where the carbon dioxide in the ethane product is removed to less than 500 ppmw.
  - c. The rich amine from the Contactor is regenerated in the Amine Regenerator where heat input is used to drive the carbon dioxide and water overhead and vented to the atmosphere.
  - d. The lean amine from the bottom of the Regenerator is recycled back to the Amine Contactor.
- 14.1.3. Maximum aggregate VOC emissions from both Ethane Amine Units (S011, S014) shall not exceed 0.16 pounds per hour and 0.72 tons per year.

### **14.2. Monitoring Requirements**

- 14.2.1. The permittee shall monitor the aggregate throughput of sour ethane fed to both Ethane Amine Units on a monthly basis.

### **14.3. Recordkeeping Requirements**

- 14.3.1. The permittee shall maintain a record of the monthly gas throughput to the Amine System (S011) to demonstrate compliance with section 14.1.1 of this permit.

## **15.0. Source-Specific Requirements (Liquids Loading, S008)**

### **15.1. Limitations and Standards**

- 15.1.1. Maximum Throughput Limitation. The maximum liquids throughput to the Liquids Loading area (S008) at the Fractionating Processing Plant shall not exceed the following:

Tank Name	Capacity (gal)	Truck Loading (gpm)	Rail Loading (gpm)	Barge Loading (gpm)
Propane (US-800)	2,142,000	3,600	4,000	3,000
Isobutane (US-801)	865,200	3,600	4,000	0
Butane (US-804)	865,200	3,600	4,000	0
Natural Gas Liquids (NGL) (US-805)	865,200	3,600	0	0
Gasoline (TK-802)	714,000	600	2,000	3,000

- 15.1.2. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 15.1.3. The Liquids Loading area (S008) at the Fractionating Processing Plant shall be operated in accordance with the plans and specifications filed in Permit Application R13-2896. The system will employ a vapor balance (closed system) to route all vapors back to the tanks.

### **15.2. Recordkeeping Requirements**

- 15.2.1. To demonstrate compliance with section 15.1.1 the permittee shall maintain a monthly record of the amount of liquids processed in the Liquids Loading area (S008) at the Fractionating Processing Plant.

## **16.0. Source-Specific Requirements (40 CFR 60 Subpart KKK Requirements: Fractionation Train 1 and Cryogenic Train 2)**

### **16.1. Limitations and Standards**

#### **16.1.1. Applicability and Designation of an Affected Facility.**

- (a) (1) The provisions of this subpart apply to affected facilities in onshore natural gas processing plants.
- (2) A compressor in VOC service or in wet gas service is an affected facility.
- (3) The group of all equipment except compressors (defined in §60.631) within a process unit is an affected facility.
- (b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 20, 1984, and on or before August 23, 2011, is subject to the requirements of this subpart.
- (c) Addition or replacement of equipment (defined in §60.631) for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.
- (d) Facilities covered by subpart VV or subpart GGG of 40 CFR part 60 are excluded from this subpart.
- (e) A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered by this subpart if it is located at an onshore natural gas processing plant. If the unit is not located at the plant site, then it is exempt from the provisions of this subpart.

#### **[40 C.F.R. § 60.630]**

#### **16.1.2. Standards.**

- (a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§60.482-1 (a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in §60.633, as soon as practicable, but no later than 180 days after initial startup.
- (b) An owner or operator may elect to comply with the requirements of §§60.483-1 and 60.483-2.
- (c) An owner or operator may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of §60.634 of this subpart.
- (d) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §60.485 except as provided in §60.633(f) of this subpart.
- (e) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §§60.486 and 60.487 except as provided in §§60.633, 60.635, and 60.636 of this subpart.
- (f) An owner or operator shall use the following provision instead of §60.485(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining



the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-63, 77, or 93, E168-67, 77, or 92, or E260-73, 91, or 96 (incorporated by reference as specified in §60.17) shall be used.

**[40 C.F.R. § 60.632]**

**16.1.3. Exceptions.**

- (a) Each owner or operator subject to the provisions of this subpart may comply with the following exceptions to the provisions of subpart VV.
  - (b) (1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485(b) except as provided in §60.632(c), paragraph (b)(4) of this section, and §60.482-4 (a) through (c) of subpart VV.
  - (2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  - (3) (i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9.
  - (ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
  - (4) (i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by nonplant personnel may be monitored after a pressure release the next time the monitoring personnel are on site, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4(b)(1) of subpart VV.
  - (ii) No pressure relief device described in paragraph (b)(4)(i) of this section shall be allowed to operate for more than 30 days after a pressure release without monitoring.
- (c) Sampling connection systems are exempt from the requirements of §60.482-5.
- (d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§60.482-2(a)(1) and 60.482-7(a), and paragraph (b)(1) of this section.
- (e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2(a)(1), 60.482-7(a), and paragraph (b)(1) of this section.
- (f) *Reserved.*
- (g) Flares used to comply with this subpart shall comply with the requirements of §60.18.
- (h) An owner or operator may use the following provisions instead of §60.485(e):
  - (1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17).
  - (2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17).

**[40 C.F.R. § 60.633]**

**16.1.4. Alternative Means of Emission Limitation.**

- (a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.
- (b) Any notice under paragraph (a) of this section shall be published only after notice and an opportunity for a public hearing.
- (c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.
- (d) The Administrator will treat applications under this section according to the following criteria, except in cases where he concludes that other criteria are appropriate:
  - (1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.
  - (2) If the applicant is an owner or operator of an affected facility, he must commit in writing to operate and maintain the alternative means so as to achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard.

**[40 C.F.R. § 60.634]**

**16.2. Notification, Recordkeeping and Reporting Requirements**

**16.2.1. NPP Recordkeeping Requirements.**

- (a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.486.
- (b) The following recordkeeping requirements shall apply to pressure relief devices subject to the requirements of §60.633(b)(1) of this subpart.
  - (1) When each leak is detected as specified in §60.633(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.
  - (2) When each leak is detected as specified in §60.633(b)(2), the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
    - (i) The instrument and operator identification numbers and the equipment identification number.
    - (ii) The date the leak was detected and the dates of each attempt to repair the leak.
    - (iii) Repair methods applied in each attempt to repair the leak.
    - (iv) "Above 10,000 ppm" if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 10,000 ppm or greater.
    - (v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

- (vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
  - (vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
  - (viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
  - (ix) The date of successful repair of the leak.
  - (x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §60.482-4(a). The designation of equipment subject to the provisions of §60.482-4(a) shall be signed by the owner or operator.
- (c) An owner or operator shall comply with the following requirement in addition to the requirement of §60.486(j): Information and data used to demonstrate that a reciprocating compressor is in wet gas service to apply for the exemption in §60.633(f) shall be recorded in a log that is kept in a readily accessible location.

**[40 C.F.R. § 60.635]**

**16.2.2. NPP Reporting Requirements.**

- (a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.487.
- (b) An owner or operator shall include the following information in the initial semiannual report in addition to the information required in §60.487(b) (1)-(4): Number of pressure relief devices subject to the requirements of §60.633(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4(a) and those pressure relief devices complying with §60.482-4(c).
- (c) An owner or operator shall include the following information in all semiannual reports in addition to the information required in §60.487(c)(2) (i) through (vi):
  - (1) Number of pressure relief devices for which leaks were detected as required in §60.633(b)(2) and
  - (2) Number of pressure relief devices for which leaks were not repaired as required in §60.633(b)(3).

**[40 C.F.R. § 60.636]**

## **17.0. Source-Specific Requirements (40 CFR 60 Subpart OOOO Requirements, Fractionation Train 2 and Cryogenic Train 1)**

### **17.1. Limitations and Standards**

17.1.1. The permittee must be in compliance with the standards of this subpart no later than October 15, 2012 or upon startup, whichever is later.  
**[40 C.F.R. § 60.5370(a)]**

17.1.2. The permittee is exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.  
**[40 C.F.R. § 60.5370(c)]**

#### **17.1.3. Natrium I Demethanizer Equipment Leak Standards.**

This section applies to the group of all equipment, except compressors, within a process unit.

- (a) You must comply with the requirements of §§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in §60.5401.
- (b) You may elect to comply with the requirements of §§60.483-1a and 60.483-2a, as an alternative.
- (c) You may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart according to the requirements of §60.5402 of this subpart.
- (d) You must comply with the provisions of §60.485a of this part except as provided in paragraph (f) of this section.
- (e) You must comply with the provisions of §§60.486a and 60.487a of this part except as provided in §§60.5401, 60.5421, and 60.5422 of this part.
- (f) You must use the following provision instead of §60.485a(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-93, E168-92, or E260-96 (incorporated by reference as specified in §60.17) must be used.

**[40 C.F.R. § 60.5400]**

#### **17.1.4. Exceptions to the Natrium I Demethanizer Equipment Leak Standards.**

- (a) You may comply with the following exceptions to the provisions of §60.5400(a) and (b).
- (b) (1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485a(b) except as provided in §60.5400(c) and in paragraph (b)(4) of this section, and §60.482-4a(a) through (c) of subpart VVa.

- (2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.
- (3) (i) When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9a.
  - (ii) A first attempt at repair must be made no later than 5 calendar days after each leak is detected.
- (4) (i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are on-site, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4a(b)(1) of subpart VVa.
  - (ii) No pressure relief device described in paragraph (b)(4)(i) of this section must be allowed to operate for more than 30 days after a pressure release without monitoring.
- (c) Sampling connection systems are exempt from the requirements of §60.482-5a.
- (d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§60.482-2a(a)(1) and 60.482-7a(a), and paragraph (b)(1) of this section.
- (e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2a(a)(1), 60.482-7a(a), and paragraph (b)(1) of this section.
- (f) An owner or operator may use the following provisions instead of §60.485a(e):
  - (1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).
  - (2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).
- (g) An owner or operator may use the following provisions instead of §60.485a(b)(2): A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(8). Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

**[40 C.F.R. § 60.5401]**

**17.1.5. Alternative Emission Limitations for Equipment Leaks at Natrium I Demethanizer.**

- (a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register, a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.
- (b) Any notice under paragraph (a) of this section must be published only after notice and an opportunity for a public hearing.
- (c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.
- (d) The Administrator will treat applications under this section according to the following criteria, except in cases where the Administrator concludes that other criteria are appropriate:
  - (1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.
  - (2) If the applicant is an owner or operator of an affected facility, the applicant must commit in writing to operate and maintain the alternative means so as to achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard.

**[40 C.F.R. § 60.5402]**

**17.2. Initial Compliance Demonstration**

17.2.1. You must determine initial compliance with the standards for each affected facility using the requirements in paragraph (f) of this section. The initial compliance period begins on October 15, 2012 or upon initial startup, whichever is later, and ends no later than one year after the initial startup date for your affected facility or no later than one year after October 15, 2012. The initial compliance period may be less than one full year.

- (f). For affected facilities at onshore natural gas processing plants, initial compliance with the VOC requirements is demonstrated if you are in compliance with the requirements of § 60.5400.

**[40CFR§60.5410, Natrium I Demethanizer Unit]**

**17.3. Continuous Compliance Demonstration**

17.3.1. For affected facilities at onshore natural gas processing plants, continuous compliance with VOC requirements is demonstrated if you are in compliance with the requirements of § 60.5400.

17.3.2. Affirmative defense for violations of emission standards during malfunction. In response to an action to enforce the standards set forth in §§ 60.5375, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at § 60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in § 60.5420(a), and must prove by a preponderance of evidence that:

- (i) The violation:

(A) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

(B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(D) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(ii) Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(iii) The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(iv) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(v) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health; and

(vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(vii) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

(viii) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

(2) Report. The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (h)(1) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

**[40CFR§60.5415]**

#### **17.4. Notification, Recordkeeping and Reporting Requirements**

- 17.4.1. (b) **Reporting requirements.** You must submit annual reports containing the information specified in paragraphs (b)(1) through (6) of this section to the Administrator and performance test reports as specified in paragraph (b)(7) or (8) of this section. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility,

you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (6) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- (7) (i) Within 60 days after the date of completing each performance test (see §60.8 of this part) as required by this subpart, except testing conducted by the manufacturer as specified in §60.5413(d), you must submit the results of the performance tests required by this subpart to the EPA as follows. You must use the latest version of the EPA's Electronic Reporting Tool (ERT) (see <http://www.epa.gov/ttn/chief/ert/index.html>) existing at the time of the performance test to generate a submission package file, which documents the performance test. You must then submit the file generated by the ERT through the EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed by logging in to the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). Only data collected using test methods supported by the ERT as listed on the ERT Web site are subject to this requirement for submitting reports electronically. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in §60.4.
- (ii) All reports, except as specified in paragraph (b)(8) of this section, required by this subpart not subject to the requirements in paragraph (a)(2)(i) of this section must be sent to the Administrator at the appropriate address listed in §60.4 of this part. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy).

**[40CFR§60.5420]**

**17.4.2. Natrium I Demethanizer Unit Additional Recordkeeping Requirements.**

- (a) You must comply with the requirements of paragraph (b) of this section in addition to the requirements of §60.486a.
- (b) The following recordkeeping requirements apply to pressure relief devices subject to the requirements of §60.5401(b)(1) of this subpart.
  - (1) When each leak is detected as specified in §60.5401(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, must be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.
  - (2) When each leak is detected as specified in §60.5401(b)(2), the following information must be recorded in a log and shall be kept for 2 years in a readily accessible location:
    - (i) The instrument and operator identification numbers and the equipment identification number.



- (ii) The date the leak was detected and the dates of each attempt to repair the leak.
- (iii) Repair methods applied in each attempt to repair the leak.
- (iv) “Above 500 ppm” if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 500 ppm or greater.
- (v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
- (vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
- (vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
- (viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
- (ix) The date of successful repair of the leak.
- (x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §60.482-4a(a). The designation of equipment subject to the provisions of §60.482-4a(a) must be signed by the owner or operator.

**[40CFR§60.5421, Natrium I Demethanizer Unit]**

**17.4.3. Natrium I Demethanizer Unit Additional Reporting Requirements.**

- (a) You must comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii).
- (b) An owner or operator must include the following information in the initial semiannual report in addition to the information required in §60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of §60.5401(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4a(a) and those pressure relief devices complying with §60.482-4a(c).
- (c) An owner or operator must include the following information in all semiannual reports in addition to the information required in §60.487a(c)(2)(i) through (vi):
  - (1) Number of pressure relief devices for which leaks were detected as required in §60.5401(b)(2); and
  - (2) Number of pressure relief devices for which leaks were not repaired as required in §60.5401(b)(3).

**[40CFR§60.5422, Natrium I Demethanizer Unit]**

## **18.0. Source-Specific Requirements (28LAER LDAR Requirements)**

### **18.1. Limitations and Standards**

- 17.1.1. In accordance with information given in permit application R13-2896C, the permittee shall implement the TCEQ 28LAER leak detection and repair (LDAR) program for Fugitive Area 2.

## CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup>

(please use blue ink)

Responsible Official or Authorized Representative \_\_\_\_\_

Date \_\_\_\_\_

Name & Title

(please print or type)

Name \_\_\_\_\_

Title \_\_\_\_\_

Telephone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

<sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
  - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
  - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.